

**ABSTRACT**

The present invention relates to wireless communications and is particularly applicable to devices and modules for correcting errors introduced to a wireless signal after its transmission. An equalizer is provided which compensates for undesirable effects on received radio signals introduced by either signal processing or by the transmission medium. In operation, the equalizer multiplies the complex received signal with a complex corrective signal that compensates for these effects. A tap corrective signal corrects for time-varying channel effects (i.e. channel distortions), a timing tracking signal corrects for carrier frequency offset errors, and a phase tracking signal corrects for sampling frequency offset errors.